



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 10/766457

TO: Ralph J Gitomer
Location: 3d65 / 3c18
Art Unit: 1655
Monday, June 12, 2006

Case Serial Number: 10/766457

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes



=> b hcap
FILE 'HCAPLUS' ENTERED AT 16:02:35 ON 12 JUN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 12 Jun 2006 VOL 144 ISS 25
FILE LAST UPDATED: 11 Jun 2006 (20060611/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all 139 tot

L39 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:152797 HCAPLUS
DN 144:385388
ED Entered STN: 19 Feb 2006
TI Fluorescence Probe with a pH-Sensitive Trigger
AU Galande, Amit K.; Weissleder, Ralph; Tung, Ching-Hsuan
CS Center for Molecular Imaging Research, Massachusetts General Hospital,
Charlestown, MA, 02129, USA
SO Bioconjugate Chemistry (2006), 17(2), 255-257
CODEN: BCCHE; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
CC 9-5 (Biochemical Methods)
Section cross-reference(s): 34, 80
AB Acid-catalyzed hydrolysis was used as the mechanism to design a new type of environmentally sensitive fluorescence probe. A mild and selective periodate oxidation of the 2-amino alc. of serine in the presence of a disulfide bond was developed to prepare dialdehyde peptides. Two identical fluorochrome hydrazide derivs. were then linked to the dialdehyde peptide forming an acid-labile hydrazone linkage. This self-quenched probe is weakly fluorescent at a physiol. pH of 7.4 but shows more than 3-fold fluorescence enhancement at pH 4.5.
ST fluorescence probe pH sensitive trigger
IT Hydrolysis
(acid; fluorescence probe with pH-sensitive trigger based on
acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)
IT Peptides, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(dialdehyde; fluorescence probe with pH-sensitive trigger based on
acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)
IT Disulfide group
Fluorescence
Fluorescence quenching
Fluorescent indicators
Fluorometry
PH (fluorescence probe with pH-sensitive trigger based on acid-catalyzed

hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT **Hydrazones**
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (fluorochrome-dialdehyde peptide; fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT **Oxidation**
 (peptide; fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT **Dialdehydes**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (peptide; fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT 882690-04-2P, CY5G2
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT 882520-91-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT 882520-87-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

IT 7790-28-5, Sodium periodate
 RL: BUU (Biological use, unclassified); RGT (Reagent); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
 (peptide oxidation with; fluorescence probe with pH-sensitive trigger based on acid-catalyzed hydrolysis of fluorochrome-dialdehyde peptide hydrazone)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Arap, W; Science 1998, V379, P377
- (2) Becker, A; Nat Biotechnol 2001, V19, P327 HCPLUS
- (3) Bremer, C; Nat Med 2001, V7, P743 HCPLUS
- (4) Curnis, F; Cancer Res 2002, V62, P867 HCPLUS
- (5) Ellerby, H; Nat Med 1999, V5, P1032 HCPLUS
- (6) Galande, A; J Comb Chem 2005, V7, P174 HCPLUS
- (7) Galande, A; Org Lett 2003, V5, P3531
- (8) Geoghegan, K; Bioconjugate Chem 1992, V3, P138 HCPLUS
- (9) Gerweek, L; Cancer Res 1996, V56, P1194
- (10) Hensbergen, Y; Biochem Pharmacol 2002, V63, P897
- (11) Johansson, M; Chem Eur J 2003, V9, P3466 HCPLUS
- (12) Kato, D; Nat Chem Biol 2005, V1, P33 HCPLUS
- (13) Law, B; ChemBioChem 2005, V6, P1361 HCPLUS
- (14) Offord, R; Methods Enzymol 1997, V287, P348 HCPLUS
- (15) Packard, B; Methods Enzymol 1997, V278, P15 HCPLUS
- (16) Rudin, M; Nat Rev Drug Discovery 2003, V2, P123 HCPLUS
- (17) Selvin, P; Nat Struct Biol 2000, V7, P730 HCPLUS
- (18) Tung, C; Bioconjugate Chem 1999, V10, P892 HCPLUS
- (19) Tung, C; Biopolymers 2004, V76, P391 HCPLUS
- (20) Tung, C; Mol Pharm 2004, V2, P92
- (21) Weissleder, R; Nat Biotechnol 1999, V17, P375 HCPLUS
- (22) Weissleder, R; Nat Med 2003, V9, P123 HCPLUS
- (23) Zhang, J; Nat Rev Mol Cell Biol 2002, V3, P906 HCPLUS
- (24) Zhang, Z; ChemBioChem 2005, V26, P2182 HCPLUS
- (25) Zhang, Z; Pharm Res 2005, V22, P381 HCPLUS

AN 2006:11531 HCAPLUS
 DN 144:102922
 ED Entered STN: 06 Jan 2006
 TI Fluorogenic enzyme activity assay using substrates containing fragmentable linkers
 IN Graham, Ronald J.
 PA Applera Corporation, USA
 SO U.S. Pat. Appl. Publ., 53 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 INCL 435007100; 435023000; 530317000; 435188500; 540140000
 CC 7-1 (Enzymes)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US2006003383	A1	20060105	2005US-0147827	20050607
PRAI 2004US-577995P	P	20040607		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2006003383	INCL	435007100; 435023000; 530317000; 435188500; 540140000
	IPCI	C12Q0001-68 [I,A]; G01N0033-53 [I,A]; C12Q0001-37 [I,A]
	NCL	435/007.100
	ECLA	C12Q001/34; C12Q001/37; C12Q001/42; C12Q001/44

OS MARPAT 144:102922
 AB Substrate compound-containing micelles and various compns., kits and methods for their preparation and use are provided. The substrate compound comprises a hydrophobic moiety capable of integrating the substrate compound into a micelle, a fluorescent moiety, a trigger moiety, and a linker moiety linking the hydrophobic moiety, the fluorescent moiety and the trigger moiety together. The substrate compound can be incorporated into a micelle and subjected to conditions effective to allow activation of the trigger moiety by a trigger agent. Activation of the trigger moiety initiates a spontaneous rearrangement that results in the fragmentation of the substrate compound to release either the fluorescent moiety or the hydrophobic moiety, thereby increasing the fluorescent signal produced by the fluorescent moiety. Exemplary preparation of a substrate compound that comprises a linker moiety that fragment via a 1,6-elimination reaction is reported.

ST enzyme detn fluorogenic assay linker fragmentation elimination micelle
 IT Antibodies and Immunoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (catalytic; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)
 IT Fluorescent dyes
 (cyanine; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)
 IT Cyanine dyes
 (fluorescent; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)
 IT Fluorescence quenching
 Fluorescent indicators
 Fluorometry
 Fragmentation reaction
 Linking agents
 Micelles
 (fluorogenic enzyme activity assay using substrates containing fragmentable linkers)
 IT Enzymes, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (fluorogenic enzyme activity assay using substrates containing fragmentable linkers)
 IT Reduction
 (fragmentation triggered in reducing conditions; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT Cyclization
 Elimination reaction
 (fragmentation via; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT Molecules
 (hydrophobic, substrate containing hydrophobic moiety; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT Fatty acids, uses
 Glycerophospholipids
 Phospholipids, uses
 Sphingolipids
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (substrate containing; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT Lactonization
 (tri-Me lock, fragmentation via; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT Fluorescent dyes
 (xanthene, fluorescein, rhodamine, phthalocyanine, squaraine or bodipy; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 9001-62-1, Lipase 9001-90-5, Plasmin 9002-07-7, Trypsin 9013-05-2, Phosphatase 9013-79-0, Esterase 9014-06-6, Penicillin G acylase 9031-98-5, Carboxypeptidase 9032-92-2, Glycosidase 9074-87-7, Carboxypeptidase G2
 RL: ANT (Analyte); ANST (Analytical study)
 (fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 872676-93-2 872676-94-3 872676-95-4 872676-96-5 872676-97-6
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 9001-92-7, Proteinase
 RL: ANT (Analyte); ANST (Analytical study)
 (protease; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 872676-92-1P
 RL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (substrate preparation; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 544-63-8, Myristic acid, reactions 3011-34-5, 4-Hydroxy-3-nitrobenzaldehyde 3068-32-4 18162-48-6, tert-Butyldimethylsilyl chloride 141749-41-9, 5-(Aminomethyl)fluorescein hydrochloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (substrate preparation; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

IT 77667-26-6P 854275-13-1P 854275-14-2P 854275-15-3P 854275-16-4P
 872676-90-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (substrate preparation; fluorogenic enzyme activity assay using substrates containing fragmentable linkers)

L39 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1046589 HCAPLUS

DN 144:2517

ED Entered STN: 30 Sep 2005

TI Engineering of an electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA

AU Rostron, James P.; Ulrich, Gilles; Retailleau, Pascal; Harriman, Anthony; Ziessel, Raymond

CS Molecular Photonics Laboratory, School of Natural Sciences (Chemistry), University of Newcastle, Newcastle upon Tyne, NE1 7RU, UK

SO New Journal of Chemistry (2005), 29(10), 1241-1244
 CODEN: NJCHE5; ISSN: 1144-0546
 PB Royal Society of Chemistry
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 Section cross-reference(s): 3, 78
 AB A highly fluorescent dual-dye, comprising 4,4-difluoro-8-(aryl)-1,3,5,7-tetramethyl-2,6-diethyl-4-bora-3a,4a-diaza-s-indacene and 1-pyrenyl fragments linked orthogonally at the pseudo-meso position, displays a wide choice of excitation wavelengths due to intramol. energy transfer and undergoes efficient fluorescence quenching when bound to double-stranded DNA.
 ST electronically decoupled difluoroindacene pyrene dyad DNA affinity fluorometry
 IT DNA
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process) (double-stranded; engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching)
 IT Crystal structure
 Fluorescence
 Fluorescence quenching
 Fluorescent indicators
 Fluorometry
 Intramolecular energy transfer
 Molecular association
 Molecular recognition
 UV and visible spectra
 (engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching)
 IT Formation constant
 Oxidation, electrochemical
 Reduction, electrochemical
 (engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching in relation to)
 IT Biosensors
 Optical sensors
 (fluorescent; engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching in relation to)
 IT Electron delocalization
 (π ; engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching in relation to)
 IT 869860-03-7P
 RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching)
 IT 869860-04-8P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (engineering of fluorescent electronically decoupled difluoroindacene-pyrene dyad possessing high affinity for DNA with fluorescence quenching)
 IT 109-63-7 517-22-6, Kryptopyrrole 766-97-2, 4-Ethynyltoluene
 3029-19-4, 1-Pyrenecarboxaldehyde 250734-48-6

RL: RCT (Reactant); RACT (Reactant or reagent)
 (engineering of fluorescent electronically decoupled
 difluoroindacene-pyrene dyad possessing high affinity for DNA with
 fluorescence quenching)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Becker, H; J Am Chem Soc 1999, V121, P11947 HCPLUS
- (2) Berstrom, F; J Am Chem Soc 2002, V124, P196
- (3) Bowen, B; Photochem Photobiol 2003, V78, P582 HCPLUS
- (4) Brabec, V; Biophys Chem 1979, V9, P289 HCPLUS
- (5) Cho, N; J Am Chem Soc 1993, V115, P6349 HCPLUS
- (6) Christensen, U; Helv Chim Acta 2003, V86, P2090 HCPLUS
- (7) Didenko, V; BioTechniques 2001, V31, P1106 HCPLUS
- (8) Geacintov, N; J Am Chem Soc 1976, V98, P6444 HCPLUS
- (9) Harriman, A; Angew Chem Int Ed 1999, V38, P945 HCPLUS
- (10) Haugland, R; Handbook of Molecular Probes and Research Products, 9th edn 2002
- (11) Hissler, M; Chem Eur J 1999, V5, P3366 HCPLUS
- (12) Huber, R; Chem Commun 2003, P1878 HCPLUS
- (13) Johnston, D; Inorg Chem 1994, V33, P161
- (14) Karolin, J; J Am Chem Soc 1994, V116, P7801 HCPLUS
- (15) Kubista, M; Biochemistry 1987, V26, P4545 HCPLUS
- (16) Meehan, T; J Biol Chem 1982, V257, P10479 HCPLUS
- (17) Okamoto, A; J Am Chem Soc 2004, V126, P8364 HCPLUS
- (18) Shinozuka, K; J Chem Soc, Chem Commun 1994, P1377 HCPLUS
- (19) Steenken, S; J Am Chem Soc 1992, V114, P4701 HCPLUS
- (20) Steenken, S; J Am Chem Soc 1997, V119, P617 HCPLUS
- (21) Tanious, F; Biochemistry 1992, V31, P3103 HCPLUS
- (22) Ulrich, G; J Org Chem 2004, V69, P2070 HCPLUS
- (23) Valeur, B; Molecular Fluorescence: Principles and Applications 2002
- (24) Yamane, A; Nucleic Acids Res 2002, V30, P97

L39 ANSWER 4 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2005:394821 HCPLUS

DN 142:444358

ED Entered STN: 09 May 2005

TI Fluorinated resorufin compounds and their application

IN Batchelor, Robert; Ge, Yue; Gee, Kyle; Johnson, Iain; Leung, Wai-Yee; Liu, Jixiang; Patch, Brian; Smalley, Peter; Steinberg, Thomas

PA USA

SO U.S. Pat. Appl. Publ., 62 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K-0031/5415

ICS A61K-0031/538; A61K-0031/498

INCL 514224800; 514229800; 514250000; 544046000; 544102000; 544347000

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 7, 15, 28, 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US2005096315	A1	20050505	2004US-0980139	20041101 <--
	WO2005042504	A1	20050512	2004WO-US36546	20041101 <--
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI 2003US-516244P P 20031031 <--

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005096315		ICM	A61K-0031/5415
		ICS	A61K-0031/538; A61K-0031/498
		INCL	514224800; 514229800; 514250000; 544046000; 544102000; 544347000
		IPCI	A61K0031-5415 [ICM, 7]; A61K0031-538 [ICS, 7]; A61K0031-5375 [ICS, 7,C*]; A61K0031-498 [ICS, 7]
		IPCR	A61K0031-498 [I,A]; A61K0031-498 [I,C*]; A61K0031-5375 [I,C*]; A61K0031-538 [I,A]; A61K0031-5415 [I,A]; A61K0031-5415 [I,C*]
		NCL	514/224.800
WO2005042504		IPCI	C07D0265-38 [ICM, 7]; C07D0265-00 [ICM, 7,C*]; C12Q0001-28 [ICS, 7]; C07D0495-04 [ICS, 7]; C07D0495-00 [ICS, 7,C*]; C07D0413-12 [ICS, 7]; C07D0413-00 [ICS, 7,C*]
		IPCR	C07D0265-00 [I,C*]; C07D0265-38 [I,A]; C07D0413-00 [I,C*]; C07D0413-12 [I,A]; C07D0495-00 [I,C*]; C07D0495-04 [I,A]; C12Q0001-28 [I,A]; C12Q0001-28 [I,C*]
		ECLA	C07D265/38; C07D413/12+265D+207; C07D495/04+333B+235B
OS	MARPAT 142:444358		
AB	The invention provides novel fluorinated resorufin compds. that are of use in a variety of assay formats. Also provided are methods of using the compds. and kits that include a compound of the invention and instructions detailing the use of the compound in one or more assay formats.		
	2,8-Difluoro-10-acetyl-3,7-dihydroxyphenoxazine (I) was prepared from 4-fluororesorcinol and isoamyl nitrate in four steps. I was used in enzyme assays for cyclooxygenase 2, Hb, and glycerol, and in an ELISA for C-reactive protein.		
ST	fluorinated resorufin assay reagent; enzyme assay fluorinated resorufin reagent; ELISA fluorinated resorufin reagent		
IT	Lipopolysaccharides		RL: BSU (Biological study, unclassified); BIOL (Biological study) (Escherichia coli, COX-2 activity induced by, detection of; fluorinated resorufin compds. and their use in assays)
IT	Antibodies and Immunoglobulins		RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study) (IgA, antibody to, conjugates with peroxidase; fluorinated resorufin compds. and their use in assays)
IT	Antibodies and Immunoglobulins		RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study) (IgE, antibody to, conjugates with peroxidase; fluorinated resorufin compds. and their use in assays)
IT	Antibodies and Immunoglobulins		RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study) (IgG, antibody to, conjugates with peroxidase; fluorinated resorufin compds. and their use in assays)
IT	Antibodies and Immunoglobulins		RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study) (IgG, antibody to, conjugates with peroxidase; fluorinated resorufin compds. and their use in assays)
IT	Proteins		RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses) (IgG-binding, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
IT	Macrophage		(LPS-induced COX-2 activity in, detection of; fluorinated resorufin compds. and their use in assays)
IT	Animal cell line		(RAW264.7, LPS-induced COX-2 activity in, detection of; fluorinated resorufin compds. and their use in assays)
IT	Functional groups		(acrylamide, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
IT	Cyano group		

(acyl, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
 IT Functional groups
 (alkoxycarbonyl groups, activated, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
 IT Samples
 (anal. of; fluorinated resorufin compds. and their use in assays)
 IT Functional groups
 (anhydride group, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
 IT Functional groups
 (aniline, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
 IT Cell
 Chelating agents
 Drugs
 Microorganism
 Virus
 (as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
 IT Agglutinins and Lectins
 Amino acids, biological studies
 Antibodies and Immunoglobulins
 Avidins
 Growth factors, animal
 Haptens
 Hormones, animal, biological studies
 Lipids, biological studies
 Lipopolysaccharides
 Nucleic acids
 Nucleosides, biological studies
 Nucleotides, biological studies
 Oligonucleotides
 Peptides, biological studies
 Polymers, biological studies
 Polysaccharides, biological studies
 Proteins
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
 IT Cotton fibers
 Magnetic particles
 Membranes, nonbiological
 Microtiter plates
 Particles
 (as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
 IT Glass beads
 Polyamides, biological studies
 Silica gel, biological studies
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
 IT Lipids, biological studies
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (assembly, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)
 IT Functional groups
 (azido group, acyl, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)
 IT Functional groups
 (azido group, fluorinated resorufin compds. containing reactive;

fluorinated resorufin compds. and their use in assays)

IT Functional groups
(aziridine, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(azo, diazoalkyl, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Latex
(beads, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Spheres
(beads, plastic, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(biotin-binding, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(blood, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(boronate, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Agglutinins and Lectins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates, with fluorinated resorufin compound, for distinguishing between gram-pos. bacteria and gram-pos. bacteria; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: SPN (Synthetic preparation); PREP (Preparation)
(conjugates, with fluorinated resorufin compound; fluorinated resorufin compds. and their use in assays)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates, with horseradish peroxidase; fluorinated resorufin compds. and their use in assays)

IT Drug screening
(cytotoxic, fluorinated resorufin compound use in testing for; fluorinated resorufin compds. and their use in assays)

IT Films
(derivatized plastic, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Plastics, biological studies
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(derivatized, films, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Metabolism
(detection of, in cells in samples, for determining viable cells; fluorinated resorufin compds. and their use in assays)

IT Oxidation
(determination of peroxide formed by; fluorinated resorufin compds. and their use in assays)

IT Immunoassay
(enzyme-linked immunosorbent assay; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(fluorescent, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Staining, biological
Stains, biological
(fluorescent; fluorinated resorufin compds. and their use in assays)

IT pH
(fluorinated resorufin compound tolerance to; fluorinated resorufin compds. and their use in assays)

IT Cytotoxicity
(fluorinated resorufin compound use in testing compds. for; fluorinated resorufin compds. and their use in assays)

IT Fluorometry
Human
Test kits
(fluorinated resorufin compds. and their use in assays)

IT C-reactive protein
Glycerides, analysis
Hemoglobins
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(fluorinated resorufin compds. and their use in assays)

IT Amino group
Formyl group
Functional groups
Sulphydryl group
(fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Alkyl halides
Aryl halides
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Solids
(fluorinated resorufin compds. linked to carrier mol. or to supports of; fluorinated resorufin compds. and their use in assays)

IT Fluorescent substances
(fluorogenic; fluorinated resorufin compds. and their use in assays)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(haloacetamido, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(haloalkyl, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(halotriazino, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(hydrazino group, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(imido ester, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Buffers
Catalysts
(in test kits; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(isocyanato group, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups

(isothiocyanato group, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(maleimido, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(metal-binding, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Biochips
(microfluidic, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal; fluorinated resorufin compds. and their use in assays)

IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(or enzyme inhibitor, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Dyes
(oxazine or thiazine; fluorinated resorufin compds. and their use in assays)

IT Particles
(paramagnetic, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Toxins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(peptide, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(phosphatidylserine-binding, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(phosphoramidite, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(photoactivatable, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Alcohols, biological studies
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polyhydric, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Microparticles
(polymeric, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Phosphatidylserines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(proteins binding, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Functional groups
(silyl, halides, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT Microscopes
(slides, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT Molecules
(small, as carrier mol. linked to fluorinated resorufin compds.;

fluorinated resorufin compds. and their use in assays)

IT **Fluorescence**
(stability of, of fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT **Proteins**
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(structural, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT **Functional groups**
(succinimidyl ester, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT **Functional groups**
(sulfonyl group, halides, fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT **Particles**
(superparamagnetic, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT **Firmicutes**
(wheat germ agglutinin-fluorinated resorufin compound conjugate distinguishing gram-neg. bacteria and; fluorinated resorufin compds. and their use in assays)

IT **Gram-negative bacteria**
(wheat germ agglutinin-fluorinated resorufin compound conjugate distinguishing gram-pos. bacteria and; fluorinated resorufin compds. and their use in assays)

IT 51-67-2D, Tyramine, compds. 66-97-7D, Psoralen, compds. 9004-54-0, Dextran, biological studies 9013-20-1, Streptavidin
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT 9002-18-0, Agar 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-01-4 9003-05-8, Poly(acrylamide) 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, diazo derivs. 9004-70-0, Nitrocellulose 9005-25-8, Starch, biological studies 9005-49-6, Heparin, biological studies 9005-79-2, Glycogen, biological studies 9005-80-5, Inulin 9012-36-6, Sepharose 9036-88-8, Mannan 9037-22-3, Amylopectin 25702-74-3, FICOLL
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT 7440-21-3, Silicon, biological studies
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(chip, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT 51-67-2, Tyramine 87935-70-4 93801-18-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(conjugation with fluorinated resorufin compound; fluorinated resorufin compds. and their use in assays)

IT 9035-73-8, Oxidase 9046-28-0, Glycerol-3-phosphate oxidase
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(determination of peroxide formed by; fluorinated resorufin compds. and their use in assays)

IT 9001-37-0, Glucose oxidase 9001-96-1, Pyruvate oxidase 9002-12-4, Uricase 9002-17-9, Xanthine oxidase 9028-67-5, Choline oxidase 9028-76-6, Cholesterol oxidase 9028-79-9, Galactose oxidase 9059-11-4, Amine oxidase 39346-34-4, Glutamate oxidase 61116-22-1, Acyl Co A oxidase 69669-73-4, Glycerol oxidase

RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
 (determination of peroxide formed by; fluorinated resorufin compds. and their use in assays)

IT 56-81-5, Glycerol, analysis 102-76-1, Glyceryl triacetate
 RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 (fluorinated resorufin compds. and their use in assays)

IT 9001-62-1, Lipase 37288-11-2, Natuphos 329900-75-6, Cyclooxygenase 2
 RL: ANT (Analyte); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (fluorinated resorufin compds. and their use in assays)

IT 58-85-5D, Biotin, conjugates with fluorinated resorufin compds.
 635-78-9D, Resorufin, fluorinated compds. 851128-53-5 851128-54-6
 851128-55-7
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (fluorinated resorufin compds. and their use in assays)

IT 69-79-4, Maltose 83-86-3, Phytic acid 9030-19-7, Maltose phosphorylase
 9030-66-4, Glycerokinase
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (fluorinated resorufin compds. and their use in assays)

IT 851128-56-8P
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (fluorinated resorufin compds. and their use in assays)

IT 851128-52-4P
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (fluorinated resorufin compds. and their use in assays)

IT 56-65-5, 5'-ATP, analysis 506-32-1, Arachidonic acid 7647-14-5, Sodium chloride, analysis 16009-13-5, Hemin
 RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 (fluorinated resorufin compds. and their use in assays)

IT 95-88-5, 4-Chlororesorcinol 110-46-3, Isoamyl nitrite 124-43-6, Percarbamide 303-07-1, 2-Carboxyresorcinol 619-42-1, Methyl 4-bromobenzoate 698-31-7, 4-Nitrosoresorcinol 5672-89-9 6066-82-6, N-Hydroxysuccinimide 7087-68-5, N,N-Diisopropylethylamine 35770-72-0, 2,4,5-Trifluororesorcinol 75996-29-1, 5-Fluororesorcinol 103068-40-2, 2-Fluororesorcinol 103068-41-3, 4-Fluororesorcinol 133730-34-4, 2,4-Dimethoxybenzeneboronic acid 195136-71-1, 2,4-Difluororesorcinol 288259-39-2 851128-87-5 851128-95-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (fluorinated resorufin compds. and their use in assays)

IT 109755-36-4P 167627-29-4P 208652-71-5P 851128-57-9P 851128-60-4P
 851128-62-6P 851128-73-9P 851128-76-2P 851128-79-5P 851128-82-0P
 851128-83-1P 851128-85-3P 851128-89-7P 851128-90-0P 851128-92-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (fluorinated resorufin compds. and their use in assays)

IT 851128-75-1P 851128-78-4P 851128-81-9P 851128-84-2P 851128-86-4P
 851128-88-6P 851128-94-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (fluorinated resorufin compds. and their use in assays)

IT 7440-06-4D, Platinum, reactive complexes, compds. with fluorinated resorufins
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(fluorinated resorufin compds. containing reactive; fluorinated resorufin compds. and their use in assays)

IT 9003-99-0, Peroxidase
 RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (fluorogenic compound reaction with peroxide in presence of; fluorinated resorufin compds. and their use in assays)

IT 9003-99-0D, Peroxidase, conjugates with carrier 39391-18-9,
 Cyclooxygenase
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); CAT (Catalyst use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (fluorogenic compound reaction with peroxide in presence of; fluorinated resorufin compds. and their use in assays)

IT 7722-84-1, Hydrogen peroxide, analysis
 RL: ANT (Analyte); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 (fluorogenic compound reaction with, in presence of peroxidase; fluorinated resorufin compds. and their use in assays)

IT 14915-07-2, Peroxide
 RL: ANT (Analyte); BSU (Biological study, unclassified); FMU (Formation, unclassified); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative)
 (fluorogenic compound reaction with, in presence of peroxidase; fluorinated resorufin compds. and their use in assays)

IT 1344-28-1, Alumina, biological studies
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); DEV (Device component use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (gel, as solid support linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT 851128-91-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and conjugation with tyramine; fluorinated resorufin compds. and their use in assays)

IT 851128-93-3P
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation and living cells staining with; fluorinated resorufin compds. and their use in assays)

IT 851128-64-8P 851128-66-0P 851128-68-2P 851128-70-6P 851128-72-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and photostability of; fluorinated resorufin compds. and their use in assays)

IT 58-85-5, Biotin
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (proteins binding to, as carrier mol. linked to fluorinated resorufin compds.; fluorinated resorufin compds. and their use in assays)

IT 851128-96-6P
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (use in determining cytotoxicity of test compds.; fluorinated resorufin compds. and their use in assays)

L39 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:907072 HCAPLUS
 DN 138:12462
 ED Entered STN: 29 Nov 2002
 TI Detection and/or quantification method of a target molecule by a binding with a capture molecule fixed on the surface of a disc

IN Remacle, Jose; Alexandre, Isabelle; Houbion, Yves
 PA Belg.
 SO U.S. Pat. Appl. Publ., 38 pp., Cont.-in-part of U. S. Ser. No. 582,817.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C12Q-0001/68
 ICS G06F-0019/00; G01N-0033/48; G01N-0033/50; C12M-0001/34
 INCL 435006000; 435287200; 702020000
 CC 9-1 (Biochemical Methods)
 Section cross-reference(s): 3

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US2002177144	A1	20021128	2001US-0035822	20011227 <--
	WO---9935499	A1	19990715	1998WO-BE00206	19981224 <--
		W:	AL, AM, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DE, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AZ, BY, KG, KZ, MD, RU, TJ, TM		
		RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	EP---1420252	A2	20040519	2003EP-0079061	19981224 <--
	EP---1420252	A3	20040804		
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI		
	EP---1324042	A2	20030702	2002EP-0447277	20021224 <--
	EP---1324042	A3	20040114		
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK		
PRAI	1997US-071726P	P	19971230		<--
	1998WO-BE00206	W	19981224		<--
	2000US-0582817	A2	20001108		<--
	1998EP-0965057	A3	19981224		<--
	2001US-0035822	A	20011227		<--

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US	2002177144	ICM	C12Q-0001/68
		ICS	G06F-0019/00; G01N-0033/48; G01N-0033/50; C12M-0001/34
		INCL	435006000; 435287200; 702020000
		IPCI	C12Q0001-68 [ICM, 7]; G06F0019-00 [ICS, 7]; G01N0033-48 [ICS, 7]; G01N0033-50 [ICS, 7]; C12M0001-34 [ICS, 7]
		IPCR	B01J0019-00 [I, A]; B01J0019-00 [I, C*]; B01L0003-00 [I, A]; B01L0003-00 [I, C*]; C12Q0001-68 [I, A]; C12Q0001-68 [I, C*]; G01N0033-543 [I, A]; G01N0033-543 [I, C*]; G01N0035-00 [I, A]; G01N0035-00 [I, C*]
		NCL	435/006.000
		ECLA	B01J019/00C; B01L003/00C6M; C12Q001/68B10; G01N033/543K; G01N035/00C2
WO	---9935499	IPCI	G01N0033-543 [ICM, 6]; C12Q0001-68 [ICS, 6]
		IPCR	B01J0019-00 [I, A]; B01J0019-00 [I, C*]; C12Q0001-68 [I, A]; C12Q0001-68 [I, C*]; G01N0033-543 [I, A]; G01N0033-543 [I, C*]; G01N0035-00 [I, A]; G01N0035-00 [I, C*]
		ECLA	B01J019/00C; C12Q001/68B10; G01N033/543K; G01N035/00C2
EP	---1420252	IPCI	G01N0033-543 [ICM, 7]; C12Q0001-68 [ICS, 7]; B01J0019-00 [ICS, 7]; G01N0035-00 [ICS, 7]
		ECLA	G01N033/543K; G01N035/00C2
EP	---1324042	IPCI	G01N0033-543 [ICM, 7]; C12Q0001-68 [ICS, 7]; B01J0019-00 [ICS, 7]
		IPCR	B01L0003-00 [I, A]; B01L0003-00 [I, C*]; G01N0033-543 [I, A]; G01N0033-543 [I, C*]; G01N0035-00 [I, A]; G01N0035-00 [I, C*]
		ECLA	B01L003/00C6M; G01N033/543K2; G01N035/00C2; C12Q001/68B10A+565/625

AB The present invention is related to a method for the detection and/or the quantification of a target mol. by its binding with a non-cleavable capture mol. fixed on the surface of a disk comprising registered data. The present invention is also related to a disk having fixed upon its surface a non-cleavable capture mol., to its preparation process, and to a diagnostic and/or reading device of said disk or comprising said disk. DNA and proteins were detected using compact disks having immobilized capture probes.

ST target mol detn capture reagent fixed disk; DNA microarray technol compact disk immobilized probe; protein microarray technol compact disk immobilized probe

IT Functional groups
(acrylate groups, on polymer for binding capture agents, as layer on disk; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Polycarbonates, preparation
RL: ARG (Analytical reagent use); DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); ANST (Analytical study); PREP (Preparation); USES (Uses)
(aminated, CDs, with immobilized capture probe; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Fluorescent substances
(and fluorophores, as labels; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Chromophores
Radioactive substances
(as labels; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Autoimmune disease
(autoantibodies detection; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Antibodies and Immunoglobulins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(autoantibodies; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Analytical apparatus
(automated; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Spheres
(beads, micro-; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(biotinylated; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Combinatorial library
(capture agents from biol. library or; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Cytomegalovirus
Human immunodeficiency virus
(capture probes on aminated CDs; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Metals, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(colloidal reagents forming ppts.; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Information systems
(data, disks with immobilized capture agent and registered; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT *Staphylococcus aureus*
Staphylococcus epidermidis
Staphylococcus gallinarum
Staphylococcus hemolyticus
Staphylococcus hominis
Staphylococcus saprophyticus

Staphylococcus schleiferi
 Staphylococcus sciuri
 Staphylococcus simulans
 Staphylococcus xylosus
 (detection of; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Absorption spectroscopy
 Analytical apparatus
 Catalysts
 DNA microarray technology
 Diagnosis
 Diffractometry
 Drug screening
 Fluorometry
 Heaters
 Human
 Immobilization, molecular or cellular
 Lasers
 Magnetic field
 Magnetic particles
 Magnetic separation
 Microarray technology
 Microtiter plates
 Nucleic acid amplification (method)
 Nucleic acid hybridization
 Optical ROM disks
 PCR (polymerase chain reaction)
 Photomultipliers
 Protein microarray technology
 Radiochemical analysis
 Reflection spectroscopy
 Supported reagents
 (detection or determination of target mol. by capture mol. fixed on surface of disk)

IT DNA
 Proteins
 RNA
 RL: ANT (Analyte); ANST (Analytical study)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Antigens
 Carbohydrates, analysis
 Haptens
 Lipids, analysis
 Peptides, analysis
 Receptors
 RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Antibodies and Immunoglobulins
 Enzymes, analysis
 Gene expression
 Ligands
 Nucleic acids
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Test kits
 (diagnostic; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Luminescence spectroscopy
 (electroluminescence; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Luminescent substances
(electroluminescent, as labels; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Immunoassay
(enzyme-linked immunosorbent assay; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Gene, microbial
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(femA; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT DNA
RL: ARG (Analytical reagent use); DEV (Device component use); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
(immobilized, aminated, on CD; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Antibodies and Immunoglobulins
Enzymes, biological studies
Ligands
Oligonucleotides
RL: ARG (Analytical reagent use); DEV (Device component use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(immobilized; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Gene, microbial
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(mecA; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Oxidation
(of polymer layer on disk before binding capture agents; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Formyl group
(on polymer for binding capture agents, as layer on disk; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Albumins, analysis
RL: ANT (Analyte); ANST (Analytical study)
(serum; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Polymers, reactions
RL: DEV (Device component use); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(with aldehyde groups for binding capture agents, as layer on disk; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT Disks
(with registered data and immobilized capture agent; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT 2321-07-5, Fluorescein
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(antibodies to, neg. control; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT 9013-20-1, Streptavidin
RL: ANT (Analyte); ARU (Analytical role, unclassified); ANST (Analytical study)
(antibodies to, pos. control; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT 125147-73-1, Dynabeads
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(coated with streptavidin; detection or determination of target mol. by capture mol. fixed on surface of disk)

IT 7440-22-4, Silver, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(colloidal reagents forming ppts.; detection or determination of target mol. by

capture mol. fixed on surface of disk)
 IT 58-85-5D, Biotin, conjugates 9003-99-0D, Peroxidase, conjugates with streptavidin
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)
 IT 9013-20-1D, Streptavidin, conjugates with peroxidase, immobilized on disk
 RL: ARG (Analytical reagent use); DEV (Device component use); TEM
 (Technical or engineered material use); ANST (Analytical study); USES
 (Uses)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)
 IT 7440-57-5, Gold, uses
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (detection or determination of target mol. by capture mol. fixed on surface of disk)
 IT 476402-56-9 476402-57-0
 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
 (nucleotide sequence, PCR primer for mecA gene; detection or determination of target mol. by capture mol. fixed on surface of disk)

L39 ANSWER 6 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:813032 HCPLUS
 DN 139:49311
 ED Entered STN: 25 Oct 2002
 TI Three-dimensional redox imaging of frozen-quenched brain and other organs
 AU Shiino, Akihiko; Matsuda, Masayuki; Chance, Britton
 CS Department of Neurosurgery, Shiga University of Medical Science, Shiga, 520-2192, Japan
 SO Methods in Enzymology (2002), 352 (Redox Cell Biology and Genetics, Part A), 475-482
 CODEN: MENZAU; ISSN: 0076-6879
 PB Academic Press
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 AB A technique for the low temperature redox scanning of three-dimensional redox images of frozen-quenched brain and other organs is described. The advantages of low-temperature technique include: the nonradiative transfers from the excited state are often diminished at low temps. and the quantum yield of several fluorochromes is enhanced 5- to 10-fold at liquid nitrogen temps., and the integration time of the scanning significantly increases because of the complete arrest of metabolic processes, which allows a high signal-to-noise ratio by signal averaging. The method involves the optimal freezing of the sample; tissue cutting and grinding; fluorescence measurements; and calibration of redox ratio.
 ST brain redox three dimensional imaging low temp freezing quenching
 IT Imaging
 (Three-dimensional redox; three-dimensional redox imaging of frozen-quenched brain and other organs)
 IT Animal tissue
 Brain
 Calibration
 Fluorescent dyes
 Fluorometry
 Freezing
 Grinding (size reduction)
 Organ, animal
 Redox reaction
 (three-dimensional redox imaging of frozen-quenched brain and other organs)
 RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Chance, B; J Biol Chem 1979, V254, P4764 HCPLUS
- (2) Kunz, W; Biochem Med Metab Biol 1993, V50, P103 HCPLUS
- (3) Ponten, U; J Neurochem 1973, V21, P1127 HCPLUS
- (4) Quistorff, B; Anal Biochem 1985, V148, P389 HCPLUS
- (5) Shiino, A; Neuroscience 1999, V91, P1581 HCPLUS
- (6) Shiino, A; Stroke 1998, V29, P2421 MEDLINE
- (7) Sims, N; J Neurochem 1990, V55, P698 HCPLUS

L39 ANSWER 7 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:722184 HCPLUS
 DN 138:69271
 ED Entered STN: 24 Sep 2002
 TI Detection of trace Cu²⁺ by a designed calix[4]arene based fluorescent reagent
 AU Ma, Huimin; Ma, Quanli; Su, Meihong; Nie, Lihua; Han, Huiwan; Xiong, Shaoxiang; Xin, Bin; Liu, Guoquan
 CS Chinese Academy of Sciences, Institute of Chemistry, Center for Molecular Sciences, Beijing, 100080, Peop. Rep. China
 SO New Journal of Chemistry (2002), 26(10), 1456-1460
 CODEN: NJCHE5; ISSN: 1144-0546
 PB Royal Society of Chemistry
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 AB A highly Cu²⁺ selective calix[4]arene based fluorescent reagent, 5,17-bis(4-methylcoumarin-7-azo)-25,26,27,28-tetrahydroxycalix[4]arene, has been designed, synthesized and evaluated. The reagent exhibits excellent selectivity for Cu²⁺ over a wide range of alkali, alkaline earth and other transition metal ions. Quenching of its fluorescence due to a strong Cu²⁺ affinity, induced binding and selective redox reaction is not influenced by the presence of 20- to 10000-fold excesses of Al³⁺, Ca²⁺, Cd²⁺, Co²⁺, Cr³⁺, Hg²⁺, K⁺, Mg²⁺, Mn²⁺, NH⁴⁺, Ni²⁺, Pb²⁺, Zn²⁺, Cl⁻, NO₃⁻, CO₃²⁻, SO₄²⁻ or PO₄³⁻. Furthermore, with this fluorescent reagent a simple, sensitive and highly selective method has been developed for measuring trace Cu²⁺ in real biol. fluids. The combination of multiple selective responses presented here may provide a useful design strategy for preparing selective reagents of other species.
 ST trace copper detn calixarene fluorescence reagent
 IT Affinity
 Body fluid
 Brain
 Cerebrospinal fluid
 Fluorescent substances
 Fluorometry
 Human
 Molecular recognition
 Redox reaction
 (trace Cu²⁺ determination by designed calix[4]arene based fluorescent reagent)
 IT 3812-32-6, Carbonate, analysis 7429-90-5, Aluminum, analysis 7439-95-4, Magnesium, analysis 7439-96-5, Manganese, analysis 7440-09-7, Potassium, analysis 7440-50-8, Copper, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 14265-44-2, Phosphate, analysis 14280-50-3, Lead(2+), analysis 14302-87-5, Mercury(2+), analysis 14701-22-5, Nickel(2+), analysis 14797-55-8, Nitrate, analysis 14798-03-9, Ammonium, analysis 14808-79-8, Sulfate, analysis 16065-83-1, Chromium(3+), analysis 16887-00-6, Chloride, analysis 22537-48-0, Cadmium(2+), analysis 22541-53-3, Cobalt(2+), analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (trace Cu²⁺ determination by designed calix[4]arene based fluorescent reagent)
 IT 481047-52-3P 481047-53-4P
 RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (trace Cu²⁺ determination by designed calix[4]arene based fluorescent reagent)
 IT 26093-31-2 74568-07-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (trace Cu²⁺ determination by designed calix[4]arene based fluorescent reagent)

IT 113707-85-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (trace Cu²⁺ determination by designed calix[4]arene based fluorescent reagent)

RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Araki, K; Chem Lett 1989, P581 HCPLUS
- (2) Bhattacharya, S; Tetrahedron Lett 2000, V41, P10313 HCPLUS
- (3) Bohmer, V; Angew Chem, Int Ed Engl 1995, V34, P713
- (4) Cao, Q; Talanta 1998, V47, P921 HCPLUS
- (5) Chen, C; Chin Chem Lett 1998, V9, P993 HCPLUS
- (6) Corradini, R; J Org Chem 1997, V62, P6283 HCPLUS
- (7) Dean, J; Lange's Handbook of Chemistry, 15th edn 1999, P8141
- (8) Diamond, D; Anal Chem 2001, V73, P22A HCPLUS
- (9) Dujols, V; J Am Chem Soc 1997, V119, P7386 HCPLUS
- (10) Glennon, J; Anal Chem 1997, V69, P2207 HCPLUS
- (11) Gordon, J; Tetrahedron Lett 1995, V36, P2445 HCPLUS
- (12) Grandini, P; Angew Chem, Int Ed 1999, V38, P3061 HCPLUS
- (13) Gutsche, C; J Am Chem Soc 1985, V107, P6052 HCPLUS
- (14) Gutsche, C; Tetrahedron 1986, V42, P1633 HCPLUS
- (15) Han, H; CN---2260575 Y 1996
- (16) Hancock, R; Analyst 1997, V122, PR51
- (17) Ikeda, A; Chem Rev 1997, V97, P1713 HCPLUS
- (18) Jarzak, H; Anal Chim Acta 1998, V362, P121
- (19) Ji, H; Chem Commun 1999, P609 HCPLUS
- (20) Jiao, K; Sci China, Ser B 1986, P20
- (21) King, A; J Chem Soc, Chem Commun 1992, P582 HCPLUS
- (22) Kramer, R; Angew Chem, Int Ed 1998, V37, P772 HCPLUS
- (23) Kubo, Y; Chem Commun 1999, P2399 HCPLUS
- (24) Kubo, Y; J Chem Soc, Chem Commun 1993, P305 HCPLUS
- (25) Lakowicz, J; Principles of Fluorescence Spectroscopy, 2nd edn 1999
- (26) Latimer, G; Talanta 1968, V15, P1 HCPLUS
- (27) Leray, I; Chem Eur J 2001, V7, P4590 HCPLUS
- (28) Ludwig, R; Fresenius' J Anal Chem 2000, V367, P103 HCPLUS
- (29) Ma, Q; Chem Lett 2001, P100 HCPLUS
- (30) Martell, A; Coord Chem Rev 1994, V133, P39 HCPLUS
- (31) McCarrik, M; J Chem Soc, Perkin Trans 1993, V2, P1963
- (32) McFarland, S; J Am Chem Soc 2001, V123, P1260 HCPLUS
- (33) Prodi, L; New J Chem 2000, V24, P155 HCPLUS
- (34) Ritchie, K; Anal Chem 1969, V41, P163 HCPLUS
- (35) Salam Khan, M; Anal Chim Acta 1970, V49, P255
- (36) Shinkai, S; J Chem Soc Perkin Trans 1 1990, P3333 HCPLUS
- (37) Simpson, J; Nature 1979, V279, P646 HCPLUS
- (38) Suckling, K; Biological Chemistry 1980, P187
- (39) Talanova, G; Anal Chem 1999, V71, P3106 HCPLUS
- (40) Tod, M; Anal Chim Acta 1989, V217, P11 HCPLUS
- (41) Torrado, A; J Am Chem Soc 1998, V120, P609 HCPLUS
- (42) Van Tamelen, E; Bioorganic Chemistry 1978, V1V, P353
- (43) van der Veen, N; Chem Eur J 2001, V7, P4878 HCPLUS
- (44) Wasikiewicz, W; New J Chem 2001, V25, P581 HCPLUS
- (45) Wolfbeis, O; Fluorescence Spectroscopy: New Methods and Applications 1993
- (46) Yao, Y; Handbook of Physical Chemistry 1985, P1143
- (47) Yeh, M; J Org Chem 1994, V59, P754 HCPLUS
- (48) Yoon, J; Tetrahedron Lett 1997, V38, P3845 HCPLUS
- (49) Zollinger, H; Azo and Diazo Chemistry 1961, P170

L39 ANSWER 8 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2001:241379 HCPLUS

DN 134:363489

ED Entered STN: 05 Apr 2001

TI Effect of albumin on the kinetics of ascorbate oxidation

AU Lozinsky, E.; Novoselsky, A.; Shames, A. I.; Saphier, O.; Likhtenshtein, G. I.; Meyerstein, D.

CS Department of Chemistry, Ben-Gurion University of Negev, Beer Sheva, 84105, Israel

SO Biochimica et Biophysica Acta, General Subjects (2001), 1526(1),

53-60
 CODEN: BBGSB3; ISSN: 0304-4165
 PB Elsevier B.V.
 DT Journal
 LA English
 CC 9-2 (Biochemical Methods)
 AB The fluorescence intensity of the fluorophore in dansyl piperidine-nitroxide is intramolecularly quenched by the nitroxyl fragment. Therefore, the oxidation of ascorbic acid by the fluorophore-nitroxide (FN) probe can be monitored by two independent methods: steady-state fluorescence and ESR. Bovine serum albumin (BSA) affects the rate of this reaction. The influence of BSA on the rate is attributed to the adsorption of both ascorbate and the probe to BSA. Adsorption of ascorbate to BSA is confirmed by NMR relaxation expts. The spatial distribution of the mols. on the BSA surface changes the availability of ascorbate and FN to each other. The results also point out that, in the presence of BSA, the autoxidn. of ascorbate is significantly slowed down. The effect is studied at different pH values and explained in terms of the electrostatic interaction between the ascorbate anion and the BSA mol.
 ST albumin fluorophore nitroxide ascorbate oxidn
 IT Oxidation
 (biol.; effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT Adsorption
 ESR (electron spin resonance)
 Electrostatic force
 Fluorescence
 Reaction kinetics
 (effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT Nitroxides
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT Fluorescent substances
 (nitroxide-containing; effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT Autoxidation
 (of ascorbate; effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT Albumins, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (serum; effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 IT 50-81-7, Ascorbic acid, analysis
 RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
 (effect of albumin on kinetics of ascorbate oxidation probed by fluorophore-nitroxide)
 RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Carter, D; Science 1989, V4, P1195
 (2) Farrar, T; Pulse and Fourier Transform NMR Introduction to Theory and Methods 1971
 (3) Frei, B; Proc Natl Acad Sci 1989, V86, P6377 HCPLUS
 (4) Green, S; J Am Chem Soc 1990, V112, P7337 HCPLUS
 (5) Halliwell, B; Med Pharmacol 1988, V37, P569 HCPLUS
 (6) He, X; Nature 1992, V358, P209 HCPLUS
 (7) Herbelin, S; J Phys Chem B 1998, V102, P8170 HCPLUS
 (8) Kocherginsky, N; Nitroxide Spin Labels 1995, P114
 (9) Likhtenstein, G; Spin Labeling Methods in Molecular Biology 1982
 (10) Likhtenstein, G; Dokl Akad Nauk SSSR 1980, V253, P481
 (11) Lozinsky, E; J Biophys Biochem Methods 1999, V38, P29 HCPLUS

(12) Motchnik, P; Methods Enzymol 1994, V234, P269 HCAPLUS
 (13) Okore, V; Arzneim-Forsch Drug Res 1994, V44, P671 HCAPLUS
 (14) Pou, S; Anal Biochem 1993, V212, P85 HCAPLUS
 (15) Wen, Y; Macromolecules 1997, V30, P7856 HCAPLUS

L39 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:832608 HCAPLUS
 DN 134:222367
 ED Entered STN: 29 Nov 2000
 TI Fluorescence switching by O-dearylation of 7-aryloxycoumarins. Development of novel fluorescence probes to detect reactive oxygen species with high selectivity
 AU Setsukinai, Ken-ichi; Urano, Yasuteru; Kikuchi, Kazuya; Higuchi, Tsunehiko; Nagano, Tetsuo
 CS Graduate School of Pharmaceutical Sciences, The University of Tokyo, Bunkyo-ku, Tokyo, 113-0033, Japan
 SO Perkin 2 (2000), (12), 2453-2457
 CODEN: PRKTFO; ISSN: 1470-1820
 PB Royal Society of Chemistry
 DT Journal
 LA English
 CC 22-9 (Physical Organic Chemistry)
 Section cross-reference(s): 9, 41, 73, 79, 80
 OS CASREACT 134:222367
 AB Coumarins exhibit fluorescence that is dependent on the nature of their substituents. The strong fluorescence of 7-hydroxycoumarin in aqueous media is completely lost in 7-aryloxycoumarins. Judging from the relation between the electron-donating character of the substituent at the 7-position and the relative quantum efficiency of fluorescence, the authors considered that the fluorescence properties of 7-hydroxycoumarin derivs. can be explained in terms of the intramol. charge transfer (ICT) mechanism. On this basis, the authors designed and synthesized 7-(4'-hydroxyphenoxy)coumarin, 7-(2'-hydroxyphenoxy)coumarin, 7-(4'-aminophenoxy)coumarin and 7-(2'-aminophenoxy)coumarin, which the authors expected would be dearylated by highly reactive O species. These non-fluorescent aryloxycoumarins were dearylated to afford highly fluorescent 7-hydroxycoumarin upon reaction specifically with hydroxyl radical (\cdot OH), but not superoxide (O_2^-), H_2O_2 (H_2O_2), or singlet O (1O_2). Probably these compds. are applicable as specific fluorescence probes for hydroxyl radicals in an aqueous environment.
 ST fluorescence switching dearylation aryloxycoumarin; selective detn oxygen reactive specie
 IT Named reagents and solutions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (Fenton's; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)
 IT Fenton reaction
 Fluorescence
 Fluorescent dyes
 Fluorescent probes
 Inductive effect
 Substituent effects
 UV and visible spectra
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)
 IT Reactive oxygen species
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)
 IT Phenols, reactions
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT

(Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT Radicals, reactions
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT Electron transfer
 (intramol.; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT Arylation
 (retro; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 7758-89-6, Cuprous chloride
 RL: CAT (Catalyst use); USES (Uses)
 (Ullmann coupling catalyst in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 142044-47-1, 7-Hydroxycoumarin potassium salt
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
 (Ullmann coupling in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 622-50-4, 4-Iodoacetanilide 329318-60-7 329318-61-8
 RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
 (Ullmann coupling in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 93-35-6, 7-Hydroxycoumarin
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (Ullmann coupling in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 540-37-4, 4-Iodoaniline
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (acetylation for Ullmann coupling in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 19591-17-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (attempted Ullmann coupling in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 7782-44-7, Oxygen, reactions
 RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
 (attempted reaction of aryloxycoumarin with singlet; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 7722-84-1, Hydrogen peroxide, reactions 11062-77-4, Superoxide
 12030-88-5, Potassium superoxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (attempted reaction with aryloxycoumarin; fluorescence probes for determination

of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 7440-05-3, Palladium, uses 7440-44-0, Carbon, uses
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst in conversion of o-nitro group to aminophenoxycoumarin derivative; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 329318-65-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (conversion to amino derivative; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 1493-13-6, Triflic acid
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (de-tert-butylation catalyst; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 329318-62-9P 329318-63-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (de-tert-butylation in conversion to hydroxyphenyloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 329318-64-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (deacetylation in conversion to aminophenoxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 7782-44-7D, Oxygen, reactive species
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 531-59-9, 7-Methoxycoumarin 10387-49-2, 7-Acetoxycoumarin 31005-04-6, 7-Benzylxycoumarin
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 329318-66-3P 329318-67-4P 329318-68-5P 329318-69-6P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 307965-26-0P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 329318-70-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 3352-57-6, Hydroxyl, reactions

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent)
 (potential diagnostic reaction with aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 75-89-8, 2,2,2-Trifluoroethanol
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of)

IT 533-58-4, 2-Iodophenol 540-38-5, 4-Iodophenol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tert-butylation in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 115-11-7, Isobutene, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tert-butylation of iodophenols in conversion to aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

IT 76673-35-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (102 precursor in attempted reaction with aryloxycoumarin; fluorescence probes for determination of reactive oxygen species with high selectivity and fluorescence switching by O-dearylation of 7-aryloxycoumarins)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Aubry, M; J Org Chem 1989, V54, P726
- (2) Beyerman, H; Recl Trav Chim Pays-Bas 1962, V81, P691 HCPLUS
- (3) Chou, P; Chem Phys Lett 1992, V188, P49 HCPLUS
- (4) de Silva, A; Chem Rev 1997, V97, P1515 HCPLUS
- (5) Demas, J; J Phys Chem 1971, V75, P991
- (6) Dilbeck, A; J Org Chem 1978, V43, P4593
- (7) Dobashi, K; Mol Cell Biochem 2000, V205, P1 HCPLUS
- (8) Fernley, H; Biochem J 1965, V97, P95 HCPLUS
- (9) Frohlich, K; FEBS Lett 2000, V473, P6 HCPLUS
- (10) Hansch, C; Chem Rev 1991, V91, P165 HCPLUS
- (11) Hempel, S; Free Radical Biol Med 1999, V27, P146 HCPLUS
- (12) Hinohara, T; Nippon Kagaku Kaishi 1976, P247 HCPLUS
- (13) Holcombe, J; J Org Chem 1986, V51, P111 HCPLUS
- (14) Kojima, H; Anal Chem 1998, V70, P2446 HCPLUS
- (15) Makrigiorgos, G; Int J Radiat Biol 1993, V63, P445 HCPLUS
- (16) McCord, J; Science 1974, V185, P529 HCPLUS
- (17) Minta, A; J Biol Chem 1989, V264, P8171 HCPLUS
- (18) Ohe, T; Tetrahedron Lett 1995, V42, P7681
- (19) Parker, C; Analyst 1960, V85, P587 HCPLUS
- (20) Schmidt, K; Chem Biol 1995, V2, P13 HCPLUS
- (21) Srinivasan, R; Chem Phys Lett 1974, V25, P537 HCPLUS
- (22) Sun, W; Bioorg Med Chem Lett 1998, V8, P3107 HCPLUS
- (23) Takadate, A; Anal Sci 1997, V13, P753 HCPLUS
- (24) Umezawa, N; Angew Chem, Int Ed 1999, V38, P2899 HCPLUS
- (25) Urano, Y; J Chem Soc, Perkin Trans 2 1996, P1169 HCPLUS
- (26) Wheelock, C; J Am Chem Soc 1959, V81, P1348 HCPLUS
- (27) Williams, A; J Org Chem 1967, V32, P2501 HCPLUS
- (28) Wiseman, H; Biochem J 1996, V313, P17 HCPLUS
- (29) Yermolaieva, O; Proc Natl Acad Soc USA 2000, V97, P448 HCPLUS

L39 ANSWER 10 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2000:470142 HCPLUS

DN 133:249151

ED Entered STN: 12 Jul 2000

TI Redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity

AU Chen, C.-S.; Gee, K. R.

CS Molecular Probes, Inc., Eugene, OR, USA
 SO Free Radical Biology & Medicine (2000), 28(8), 1266-1278
 CODEN: FRBMEH; ISSN: 0891-5849
 PB Elsevier Science Inc.
 DT Journal
 LA English
 CC 9-4 (Biochemical Methods)
 AB The trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine (PF-H2TMRos, also known as RedoxSensor Red), a new fluorogenic indicator for oxidative activity, was evaluated in a contact-inhibited cell line, normal rat kidney fibroblast (NRK-49F), using quant. fluorescence microscopy. After cells were incubated with 1-5 μ M dye at 37° for 10 to 30 min, fluorescent staining of its oxidized product (PF-TMRos) distributed in mitochondria and/or lysosomes. This distribution pattern varied depending on the proliferation state of cells. In proliferating cells, PF-H2TMRos was internalized through a nonendocytic pathway, then oxidized in the cytosol, followed by immediate targeting to active mitochondria, resulting in fluorescent staining in this organelle. Photo-oxidation expts. demonstrated that PF-H2TMRos is not directly transported to mitochondria. On the contrary, in contact-inhibited cells whose proliferation is inhibited, PF-H2TMRos enters cells and is transported to lysosomes before it is oxidized. This results in lysosomal rather than mitochondrial staining. In both proliferating and quiescent cell states, subcellular distribution of the oxidized dye PF-TMRos can be altered by treatment with an oxidant (hydrogen peroxide) or an antioxidant (N-acetyl-L-cysteine), indicating a regulatory relationship between cell proliferation and oxidative activity. In solution assay, this probe can be oxidized by a broad spectrum of oxidizing species including horseradish peroxidase, hydrogen peroxide and horseradish peroxidase, cytochrome c, cytochrome c and hydrogen peroxide, superoxide and hydrogen peroxide, nitric oxide (or nitrite), peroxy nitrite, and lipid hydroperoxide. Based on its subcellular distribution and its oxidation by a broad range of oxidizing species, PF-H2TMRos is demonstrated to be a novel indicator for cellular oxidative stresses.
 ST pentafluorodihydrotetramethylrosamine fluorogenic indicator redox dependent cellular oxidative activity
 IT Membrane potential
 Oxidation
 (biol.; redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Staining, biological
 (fluorescent; redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Lipids, biological studies
 Lipids, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
 (hydroperoxides; redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Hydroperoxides
 Hydroperoxides
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
 (lipid; redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Animal tissue culture
 (rat kidney fibroblast (NRK-49F); redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Cell proliferation

Fluorescence microscopy
 Fluorescent indicators
 Fluorometry
 Lysosome
 Mitochondria
 Oxidative stress, biological
 Redox reaction
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT Reactive oxygen species
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); RCT (Reactant); BIOL (Biological study); RACT
 (Reactant or reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 9003-99-0, Peroxidase
 RL: CAT (Catalyst use); USES (Uses)
 (horseradish; redox-dependent trafficking of 2,3,4,5,6-
 pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of
 cellular oxidative activity)
 IT 7782-44-7P, Oxygen, biological studies
 RL: BAC (Biological activity or effector, except adverse); BPN
 (Biosynthetic preparation); BSU (Biological study, unclassified); RCT
 (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or
 reagent)
 (reactive; redox-dependent trafficking of 2,3,4,5,6-
 pentafluorodihydrotetramethylrosamine, a novel fluorogenic indicator of
 cellular oxidative activity)
 IT 105284-17-1 167095-05-8 167095-08-1
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 62962-75-8 296277-11-7 296277-13-9 296277-15-1
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 FMU (Formation, unclassified); ANST (Analytical study); BIOL (Biological
 study); FORM (Formation, nonpreparative); USES (Uses)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 296277-09-3P
 RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);
 SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 11062-77-4P, Superoxide
 RL: BAC (Biological activity or effector, except adverse); BPN
 (Biosynthetic preparation); BSU (Biological study, unclassified); RCT
 (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or
 reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 616-91-1, N-Acetyl-L-cysteine
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); BIOL (Biological study)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 19059-14-4, Peroxynitrite
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); FMU (Formation, unclassified); RCT (Reactant); BIOL
 (Biological study); FORM (Formation, nonpreparative); RACT (Reactant or
 reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 7632-00-0, Sodium nitrite
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 10102-43-9P, Nitric oxide, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); SPN (Synthetic preparation); BIOL (Biological
 study); PREP (Preparation)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 69-89-6, Xanthine 506-32-1, Arachidonic acid
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 7722-84-1, Hydrogen peroxide, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); RCT
 (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or
 reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 7782-44-7D, Oxygen, reactive species, biological studies 33876-97-0,
 SIN-1
 RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological
 study); RACT (Reactant or reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 9002-17-9, Xanthine oxidase 9007-43-6, Cytochrome c, uses 80619-02-9,
 5-Lipoxygenase
 RL: CAT (Catalyst use); USES (Uses)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 IT 99-07-0, 3-Dimethylaminophenol 653-37-2, Pentafluorobenzaldehyde
 7439-89-6, Iron, reactions 136587-13-8, Spermine NONOate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (redox-dependent trafficking of 2,3,4,5,6-pentafluorodihydrotetramethyl
 rosamine, a novel fluorogenic indicator of cellular oxidative activity)
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Arttamangkul, S; Anal Biochem 1999, V269, P410 HCAPLUS
- (2) Burdon, R; Free Radic Biol Med 1995, V18, P775 HCAPLUS
- (3) Burdon, R; Free Radic Res 1995, V23, P471 HCAPLUS
- (4) Cao, D; J Cell Physiol 1993, V156, P428 HCAPLUS
- (5) Chen, C; Proc Natl Acad Sci USA 1998, V95, P6373 HCAPLUS
- (6) Diaz, M; New Engl J Med 1997, V337, P408 MEDLINE
- (7) Finkel, T; Curr Opin Cell Biol 1998, V10, P248 HCAPLUS
- (8) Fridovich, I; J Biol Chem 1997, V272, P18515 HCAPLUS
- (9) Gee, K; Tetrahedron Lett 1996, V37, P7905 HCAPLUS
- (10) Guyton, K; J Biol Chem 1996, V271, P4138 HCAPLUS
- (11) Harrison, D; Am J Cardiol 1995, V75, P63B
- (12) Haugland, R; Handbook of fluorescent probes and research chemicals 1996
- (13) Hempel, S; Free Radic Biol Med 1999, V27, P146 HCAPLUS
- (14) Keefer, L; Meth Enzymol 1996, V268, P281 HCAPLUS
- (15) Kelm, M; J Biol Chem 1997, V272, P9922 HCAPLUS
- (16) Markesberry, W; Free Radic Biol Med 1997, V23, P134 HCAPLUS
- (17) Metivier, D; Immunol Lett 1998, V61, P157 HCAPLUS
- (18) Misko, T; Anal Biochem 1993, V214, P11 HCAPLUS
- (19) Nagasaki, T; J Cell Sci 1994, V107, P3414
- (20) Nakamura, H; Ann Rev Immunol 1997, V15, P351 HCAPLUS
- (21) Nath, K; Kidney Int 1998, V53, P367 HCAPLUS
- (22) Palmiter, R; EMBO J 1996, V15, P1784 HCAPLUS
- (23) Polyak, K; Nature 1997, V389, P300 HCAPLUS
- (24) Poot, M; J Histochem Cytochem 1996, V44, P1363 HCAPLUS
- (25) Rottenberg, H; Biochim Biophys Acta 1998, V1404, P393 HCAPLUS
- (26) Royall, J; Arch Biochem Biophys 1993, V302, P348 HCAPLUS
- (27) Sarvazyan, N; Arch Biochem Biophys 1998, V350, P132 HCAPLUS

(28) Sekharam, M; Toxicol Appl Pharmacol 1998, V149, P210 HCAPLUS
 (29) van Zoelen, E; J Biol Chem 1991, V266, P12075 HCAPLUS
 (30) Wang, G; Proc Natl Acad Sci USA 1995, V92, P5510 HCAPLUS
 (31) Wang, H; Free Radic Biol Med 1999, V27, P612 HCAPLUS
 (32) Whitaker, J; Biochem Biophys Res Commun 1991, V175, P387 HCAPLUS

L39 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2000:453597 HCAPLUS
 DN 133:219655
 ED Entered STN: 06 Jul 2000
 TI The fluorescent oxidation products of dihydroxyphenylalanine and its esters
 AU Smith, G. J.; Haskell, T. G.
 CS New Zealand Institute for Industrial Research, Lower Hutt, N. Z.
 SO Journal of Photochemistry and Photobiology, B: Biology (2000), 55(2-3), 103-108
 CODEN: JPPBEG; ISSN: 1011-1344
 PB Elsevier Science S.A.
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 AB Dihydroxyphenylalanine (DOPA), its Me ester (DOPAM) and the N-acetylated derivative of the ester (DOPAMNA) are found to undergo rapid oxidation in air-saturated alkaline solution. Some of the products of oxidation exhibit fluorescent emission in the 300-500 nm spectral range and their excitation-emission spectra have been determined in acidic and alkaline aqueous solns. The spectral distributions and positions of the maxima depend on the pH of the solution. Excitation-emission maxima associated with the protonated phenolic form of the compds. occur at shorter wavelengths than those of the conjugate base. At some pH values the phenolic forms of these mols. are excited and undergo rapid deprotonation in the excited state; as a consequence, emission is observed from the phenolate anion. The fluorescence excitation-emission spectrum of an authentic sample of 3,4-dihydroxycinnamic (caffeic) acid has also been determined and features of the fluorescence spectra of the principal oxidation products are consistent with the presence of 3,4-hydroxycinnamoyl compds. in solns. of oxidized DOPAM and DOPAMNA.
 ST fluorescence oxidn product dihydroxyphenylalanine ester
 IT Fluorescent substances
 Fluorometry
 Oxidation
 (fluorescent oxidation products of dihydroxyphenylalanine and its esters)
 IT 39740-33-5
 RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
 (N-Acetyl-3,4-dihydroxyphenylalanine Me ester; fluorescent oxidation products of dihydroxyphenylalanine and its esters)
 IT 59-92-7, DOPA, analysis 7101-51-1, L-DOPA methyl ester
 RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
 (fluorescent oxidation products of dihydroxyphenylalanine and its esters)
 IT 331-39-5, Caffeic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (fluorescent oxidation products of dihydroxyphenylalanine and its esters)
 RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Anon; unpublished results, personal communication from N Christoforou, KP Ghiggino 1984
 (2) Boguta, G; Int J Radiat Biol 1981, V39, P163 HCAPLUS
 (3) Borgstahl, G; Biochemistry 1995, V34, P6278 HCAPLUS
 (4) Cooksey, C; Free Rad Res Commun 1987, V4, P131 HCAPLUS
 (5) Creed, D; Photochem Photobiol 1984, V39, P563 HCAPLUS
 (6) Davidson, R; J Photochem Photobiol B: Biol 1996, V33, P3 HCAPLUS
 (7) Feitelson, J; J Phys Chem 1964, V68, P391 HCAPLUS
 (8) Finnimore, E; Proc 7th Int Wool Textile Res Conf 1985, VIV, P21
 (9) Imahori, K; Biochim Biophys Acta 1955, V18, P216 HCAPLUS

(10) Irwin, C; Photochem Photobiol 1993, V57, P504 HCAPLUS
 (11) Joschek, H; J Am Chem Soc 1966, V88, P3273 HCAPLUS
 (12) Joshi, P; Biophys Biochem Res Commun 1987, V142, P265 HCAPLUS
 (13) Kato, Y; Photochem Photobiol 1994, V59, P343 HCAPLUS
 (14) Kato, Y; Photochem Photobiol 1995, V61, P367 HCAPLUS
 (15) Konya, K; J Photochem Photobiol A: Chem 1996, V100, P119 HCAPLUS
 (16) Lambert, C; Biochim Biophys Acta 1989, V993, P12 HCAPLUS
 (17) Lambert, C; Biochim Biophys Acta 1990, V1035, P319 HCAPLUS
 (18) Land, E; Rev Chem Intermed 1988, V10, P219 HCAPLUS
 (19) Lehr, S; Biochemistry 1967, V6, P757
 (20) Menter, J; Photochem Photobiol 1995, V62, P402 HCAPLUS
 (21) Ormo, M; Science 1996, V273, P1392 HCAPLUS
 (22) Peter, M; Angew Chem Int Ed Engl 1989, V28, P555
 (23) Rayner, D; Can J Chem 1978, V56, P1238 HCAPLUS
 (24) Rzepecki, L; Bioorg Mar Chem 1991, V4, P120
 (25) Sakurovs, R; J Photochem 1983, V22, P373 HCAPLUS
 (26) Schipfer, R; J Chem Soc Perkin Trans II 1981, P1443 HCAPLUS
 (27) Sugumaran, M; FEBS Lett 1991, V293, P4 HCAPLUS
 (28) Waite, J; Comp Biochem Physiol 1990, V97B, P19 HCAPLUS
 (29) Ward, W; Photochem Photobiol 1980, V31, P611 HCAPLUS
 (30) Wolf, F; Adv Front Plant Sci 1968, V21, P169 HCAPLUS
 (31) Yang, F; Nature Biotech 1996, V14, P1246 HCAPLUS

L39 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:487468 HCAPLUS

DN 131:127388

ED Entered STN: 06 Aug 1999

TI Detection system using liposomes and signal modification

IN Nicklin, Stephen; Clarke, David John; Lloyd, Christopher James; Aojula, Harmesh Singh; Tsilosani, Marina; Wilson, Michael Thomas

PA The Secretary of State for Defence, UK

SO PCT Int. Appl., 111 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N-0033/542

ICS G01N-0033/543; G01N-0033/58; G01N-0033/52

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 79, 80

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO---9938009	A1	19990729	1999WO-GB00208	19990121 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA---9900325	A	19990719	1999ZA-0000325	19990118 <--
	CA---2318170	AA	19990729	1999CA-2318170	19990121 <--
	AU---9921770	A1	19990809	1999AU-0021770	19990121 <--
	AU---749955	B2	20020704		
	EP---1049932	A1	20001108	1999EP-0901770	19990121 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP2003513225	T2	20030408	2000JP-0528866	19990121 <--
	TW---571099	B	20040111	TW 1999-88101190	19990127 <--
	US---6743638	B1	20040601	2000US-0600118	20000712 <--
	NO2000003709	A	20000921	2000NO-0003709	20000719 <--
PRAI	1998GB-0001120	A	19980121	<--	
	1999WO-GB00208	W	19990121	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 9938009	ICM	G01N-0033/542
	ICS	G01N-0033/543; G01N-0033/58; G01N-0033/52
	IPCI	G01N0033-542 [ICM, 6]; G01N0033-536 [ICM, 6, C*]; G01N0033-543 [ICS, 6]; G01N0033-58 [ICS, 6]; G01N0033-52 [ICS, 6]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
ZA---9900325	ECLA	G01N033/52; G01N033/542; G01N033/543D2; G01N033/58H2
	IPCI	G01N [ICM, 6]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
CA---2318170	IPCI	G01N0033-542 [ICM, 6]; G01N0033-536 [ICM, 6, C*]; G01N0033-52 [ICS, 6]; G01N0033-543 [ICS, 6]; G01N0033-58 [ICS, 6]
AU---9921770	IPCI	G01N0033-542 [ICM, 6]; G01N0033-536 [ICM, 6, C*]; G01N0033-543 [ICS, 6]; G01N0033-58 [ICS, 6]; G01N0033-52 [ICS, 6]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
EP---1049932	IPCI	G01N0033-542 [ICM, 6]; G01N0033-536 [ICM, 6, C*]; G01N0033-543 [ICS, 6]; G01N0033-58 [ICS, 6]; G01N0033-52 [ICS, 6]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
JP2003513225	IPCI	G01N0033-544 [ICM, 7]; G01N0015-14 [ICS, 7]; G01N0021-64 [ICS, 7]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
TW----571099	IPCI	G01N0033-542 [ICM, 7]; G01N0033-536 [ICM, 7, C*]; G01N0033-543 [ICS, 7]
US---6743638	IPCI	G01N0033-53 [ICM, 7]; G01N0033-543 [ICS, 7]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
	NCL	436/518.000; 422/068.100; 428/402.000; 428/402.200; 435/004.000; 435/006.000; 435/007.100; 435/007.900; 435/007.920; 435/174.000; 435/176.000; 435/177.000; 435/182.000; 435/287.100; 435/287.200; 435/287.300; 435/287.600; 435/287.700; 435/808.000; 435/810.000; 435/975.000; 436/164.000; 436/172.000; 436/501.000; 436/512.000; 436/524.000; 436/528.000; 436/532.000; 436/533.000; 436/534.000; 436/823.000; 436/829.000
NO2000003709	ECLA	G01N033/52; G01N033/542; G01N033/543D2; G01N033/58H2
	IPCI	G01N [ICM, 7]
	IPCR	G01N0033-52 [I,A]; G01N0033-52 [I,C*]; G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-543 [I,A]; G01N0033-543 [I,C*]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]

AB A process for detecting an analyte comprises (a) contacting a sample suspected of containing said analyte with a containment means comprising a barrier which separates signal generating reagents from said sample, in the presence of an element which interacts specifically with said analyte, under conditions whereby interaction between the analyte and the said element results in activation of the signal generating reagents within the

containment means on the side of the barrier opposite to the sample, and (b) detecting any signal generated and retained within the containment means from the sample side of the barrier. The process of the invention provides for sensitive detection of very small nos. of analyte materials using measurement techniques which include counting methods such as flow cytometry. TNT was detected using Tris-HCl pH 7.4, TNP-conjugated melittin as pore-forming reagent, liposomes containing alkaline phosphatase, ELF-97 substrate, and monoclonal antibodies to TNT. Fluorescent liposomes were counted.

ST liposome fluorescence detection system; TNT fluorescence liposome assay; flow cytometry liposome fluorescence

IT Surfactants
(Triton X compds., in signal modification; sensitive detection system using liposomes and signal modification)

IT Liposomes
Membranes, nonbiological
(as containment means, with signal generating reagents inside; sensitive detection system using liposomes and signal modification)

IT Dyes
(as signal reagent; sensitive detection system using liposomes and signal modification)

IT Avidins
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(biotinylated liposomes aggregation with; sensitive detection system using liposomes and signal modification)

IT Biological transport
(channel-mediated, in activation of signal generating system inside containment means; sensitive detection system using liposomes and signal modification)

IT Containers
(containment means, with signal generating reagents inside; sensitive detection system using liposomes and signal modification)

IT Cytometry
(flow; sensitive detection system using liposomes and signal modification)

IT Biological transport
Signal transduction, biological
(in activation of signal generating system inside containment means; sensitive detection system using liposomes and signal modification)

IT Light
pH
(in peptide activation of signal generation means; sensitive detection system using liposomes and signal modification)

IT Hemoglobins
Myoglobins
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(in peroxidin. of nanospheres; sensitive detection system using liposomes and signal modification)

IT Peptides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(in signal generation; sensitive detection system using liposomes and signal modification)

IT Enzymes, uses
RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
(in signal generation; sensitive detection system using liposomes and signal modification)

IT Buffers
Detergents
Ions

Surfactants
 (in signal modification; sensitive detection system using liposomes and signal modification)

IT Fluorescent dyes
 (interaction of, with cobalt ions, in signal generation; sensitive detection system using liposomes and signal modification)

IT Biological transport
 (ion, in activation of signal generating system inside containment means; sensitive detection system using liposomes and signal modification)

IT Chemicals
 (modifying signal from signal generating reagent, detection of; sensitive detection system using liposomes and signal modification)

IT Antibodies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (monoclonal, to TNT; sensitive detection system using liposomes and signal modification)

IT Spheres
 (nanospheres, as containment means, with signal generating reagents inside; sensitive detection system using liposomes and signal modification)

IT Peroxidation
 (of asolectin nanospheres containing carboxyfluorescein; sensitive detection system using liposomes and signal modification)

IT Fluorescence quenching
 (of nonspecific signals; sensitive detection system using liposomes and signal modification)

IT Phospholipids, reactions
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (peroxidn. of nanospheres of, containing carboxyfluorescein; sensitive detection system using liposomes and signal modification)

IT Permeability
 (perturbation of, for activation of signal generating system inside containment means; sensitive detection system using liposomes and signal modification)

IT Surface plasmon
 (resonance, in signal detection; sensitive detection system using liposomes and signal modification)

IT Analysis
 Fluorometry
 Immunoassay
 Test kits
 (sensitive detection system using liposomes and signal modification)

IT Reagents
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (signal generating, in containment; sensitive detection system using liposomes and signal modification)

IT Cardiolipins
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (signal peptide binding to liposomes response to; sensitive detection system using liposomes and signal modification)

IT Antibodies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (to analyte; sensitive detection system using liposomes and signal modification)

IT 9002-07-7, Trypsin
 RL: CAT (Catalyst use); USES (Uses)
 (TAME hydrolysis by, fluorescence monitoring of; sensitive detection system using liposomes and signal modification)

IT 2321-07-5, Fluorescein
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU

(Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (antibody to, fluorescence quenching with; sensitive detection system using liposomes and signal modification)

IT 58-85-5D, Biotin, conjugates with liposomes
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (as containment means, with signal generating reagents inside; sensitive detection system using liposomes and signal modification)

IT 234096-65-2
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (as permeabilizing peptide, pH-switched fluorescent TNT immunoassay with; sensitive detection system using liposomes and signal modification)

IT 234096-63-0
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (as permeabilizing peptide; sensitive detection system using liposomes and signal modification)

IT 234096-66-3
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (as pore-forming peptide; sensitive detection system using liposomes and signal modification)

IT 330-13-2, p-Nitrophenylphosphate
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (as quenching agent for ELF-97; sensitive detection system using liposomes and signal modification)

IT 28683-92-3D, derivs.
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (as signal reagents; sensitive detection system using liposomes and signal modification)

IT 103658-63-5 234096-67-4 234750-79-9 234750-97-1
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (as signaling peptide; sensitive detection system using liposomes and signal modification)

IT 72088-94-9, Carboxyfluorescein
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (asolectin nanospheres containing, peroxidn. of; sensitive detection system using liposomes and signal modification)

IT 68-04-2, Sodium citrate 127-09-3, Sodium acetate 1185-53-1, Tris hydrochloride 7601-54-9, Sodium phosphate
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (buffer containing, in signal modification; sensitive detection system using liposomes and signal modification)

IT 7646-79-9, Cobalt chloride, reactions
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (fluorescent dye ELF-97 response to; sensitive detection system using liposomes and signal modification)

IT 9029-60-1, Lipoxygenase
 RL: CAT (Catalyst use); USES (Uses)
 (in hydroperoxyoctadecadienoic acid preparation; sensitive detection system using liposomes and signal modification)

IT 60-33-3, 9,12-Octadecadienoic acid (9Z,12Z)-, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in hydroperoxyoctadecadienoic acid preparation; sensitive detection system using liposomes and signal modification)

IT 16009-13-5
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (in peroxidn. of nanospheres; sensitive detection system using liposomes and signal modification)

IT 33964-75-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in peroxidn. of nanospheres; sensitive detection system using liposomes and signal modification)

IT 7440-48-4D, Cobalt, complexes with dyes, reactions
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (interaction of, with ELF-97 dye, in signal generation; sensitive detection system using liposomes and signal modification)

IT 147394-94-3
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (interaction of, with cobalt ions, in signal generation; sensitive detection system using liposomes and signal modification)

IT 555-60-2, CCCP
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (ionophore, liposomes containing pyranine response to liposome-permeabilizing peptide and valinomycin and; sensitive detection system using liposomes and signal modification)

IT 234750-78-8
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (liposome-permeabilizing peptide, liposomes containing pyranine response to valinomycin and ionophore and; sensitive detection system using liposomes and signal modification)

IT 2001-95-8, Valinomycin
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (liposomes containing pyranine response to liposome-permeabilizing peptide and ionophore and; sensitive detection system using liposomes and signal modification)

IT 9001-78-9
 RL: ARG (Analytical reagent use); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
 (liposomes containing, fluorescent dye ELF-97 activation and containment in; sensitive detection system using liposomes and signal modification)

IT 6358-69-6, Pyranine
 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
 (liposomes containing, liposome-permeabilizing peptide and ionophore and valinomycin effect on; sensitive detection system using liposomes and signal modification)

IT 234096-62-9
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (liposomes containing; sensitive detection system using liposomes and signal modification)

IT 107658-43-5 234096-64-1
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (pH-switched activity of; sensitive detection system using liposomes and signal modification)

IT 118-96-7, TNT
 RL: ANT (Analyte); ANST (Analytical study)
 (sensitive detection system using liposomes and signal modification)

IT 1461-15-0, Calcein
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (sensitive detection system using liposomes and signal modification)

IT 60-00-4, EDTA, analysis
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(sensitive detection system using liposomes and signal modification)
 IT 2321-07-5D, Fluorescein, phosphatidyl ethanolamine derivs.
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); ANST (Analytical study); BIOL
 (Biological study); PROC (Process); USES (Uses)
 (transfer of; sensitive detection system using liposomes and signal
 modification)
 IT 901-47-3, TAME
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (trypsin hydrolysis of, fluorescence monitoring of; sensitive detection
 system using liposomes and signal modification)
 RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Anon; 1996, 3, HCPLUS
 (2) Anon; 1998, 20, HCPLUS
 (3) Eastman Kodak Company; EP---0255089 A 1988 HCPLUS
 (4) Mizoguchi, H; JOURNAL OF FERMENTATION AND BIOENGINEERING 1996, V81(5), P406
 HCPLUS
 (5) Tsukada, S; ANALYTICA CHIMICA ACTA 1998, V371(2-3), P192
 (6) Tutkimuskeskus, V; WO---9800714 A 1998 HCPLUS
 (7) University Of California; WO---9625665 A 1996 HCPLUS

L39 ANSWER 13 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN
 AN 1998:790743 HCPLUS
 DN 130:35356
 ED Entered STN: 17 Dec 1998
 TI Assays employing electrochemiluminescent labels and
 electrochemiluminescence quenchers
 IN Richter, Mark M.; Powell, Michael J.; Belisle, Christopher M.
 PA Boehringer Mannheim Corp., USA
 SO PCT Int. Appl., 82 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G01N-0033/542
 ICS G01N-0033/58; C12Q-0001/68
 CC 9-5 (Biochemical Methods)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO---9853316	A1	19981126	1998WO-US09552	19980511 <--
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US2001023063	A1	20010920	1998US-0074472	19980507 <--
	CA---2261758	AA	19981126	1998CA-2261758	19980511 <--
	EP---914612	A1	19990512	1998EP-0923375	19980511 <--
	EP---914612	B1	20030716		
	R: CH, DE, ES, FR, GB, IT, LI				
	JP2000517058	T2	20001219	1998JP-0550421	19980511 <--
	EP---1359416	A2	20031105	2003EP-0015594	19980511 <--
	EP---1359416	A3	20040519		
	R: CH, DE, ES, FR, GB, IT, LI				
	ES---2202860	T3	20040401	1998ES-0923375	19980511 <--
	US2006035248	A1	20060216	2005US-0124407	20050509 <--
PRAI	1997US-047605P	P	19970523	<--	
	1998US-0074472	A3	19980507	<--	
	1998EP-0923375	A3	19980511	<--	
	1998WO-US09552	W	19980511	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9853316	ICM	G01N-0033/542
	ICS	G01N-0033/58; C12Q-0001/68
	IPCI	G01N0033-542 [ICM,6]; G01N0033-536 [ICM,6,C*]; G01N0033-58 [ICS,6]; C12Q0001-68 [ICS,6]

	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
US2001023063	ECLA	G01N033/542; G01N033/58D
	IPCI	C12Q0001-68 [ICM, 7]
	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
	NCL	435/006.000
	ECLA	G01N033/542; G01N033/58D
CA---2261758	IPCI	G01N0033-52 [ICM, 6]; C12Q0001-25 [ICS, 6]; G01N0033-542 [ICS, 6]; G01N0033-536 [ICS, 6,C*]; G01N0021-66 [ICS, 6]; G01N0021-62 [ICS, 6,C*]; C12Q0001-68 [ICS, 6]; G01N0021-76 [ICS, 6]
	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
EP----914612	IPCI	G01N0033-542 [ICM, 6]; G01N0033-536 [ICM, 6,C*]; G01N0033-58 [ICS, 6]; C12Q0001-68 [ICS, 6]
	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
JP2000517058	IPCI	G01N0033-532 [ICM, 7]; G01N0027-416 [ICS, 7]; G01N0027-42 [ICS, 7]
	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
EP---1359416	IPCI	G01N0033-50 [ICM, 7]
	ECLA	G01N033/542; G01N033/58D
ES---2202860	IPCI	G01N0033-542 [ICM, 7]; G01N0033-536 [ICM, 7,C*]; G01N0033-58 [ICS, 7]; C12Q0001-68 [ICS, 7]
	IPCR	G01N0033-536 [I,C*]; G01N0033-542 [I,A]; G01N0033-58 [I,A]; G01N0033-58 [I,C*]
US2006035248	IPCI	C12Q0001-68 [I,A]
	NCL	435/006.000
	ECLA	G01N033/542; G01N033/58D

AB This invention pertains to the general field of chemical and biol. assays which employ electrochemiluminescence (ECL), also referred to as electrogenerated chemiluminescence. More particularly, the present invention pertains to certain classes of chemical moieties which strongly quench ECL, and the use of these ECL quenchers in combination with ECL labels, for example, in ECL assay methods which employ an ECL quencher and an ECL label. One class of such quenching moieties are those which comprise at least one benzene moiety. Sub-classes of such quenching moieties are those which comprise at least one phenol moiety, quinone moiety, benzene carboxylic acid, and/or benzene carboxylate moiety.

ST electrochemiluminescence quenching label fluorimetry oligonucleotide

IT Electrolysis

Fluorescence quenching

Fluorescent indicators

Fluorometry

Immobilization, biochemical

Luminescence

Magnetic particles

Oxidation, electrochemical

Test kits

(assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT Antibodies

Antigens

DNA

Enzymes, analysis

Peptides, analysis

Polysaccharides, analysis

RNA

RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)

(assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT Luminescence, chemiluminescence

(electrochemiluminescence; assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT 62-23-7, p-Nitrobenzoic acid 84-58-2, 2,3-Dichloro-5,6-dicyano-1,4-benzoquinone 92-69-3, p-Phenylphenol 92-88-6, [1,1'-Biphenyl]-4,4'-diol 98-17-9, m-Trifluoromethylphenol 99-96-7, uses 100-02-7, p-Nitrophenol, uses 102-69-2, Tri-n-propylamine 106-44-5, uses 106-51-4, 1,4-Benzoquinone, uses 108-39-4, uses 108-95-2, Phenol, uses 117-14-6, Anthraquinone-1,5-disulfonic acid 120-80-9, 1,2-Benzenediol, uses 123-31-9, 1,4-Benzenediol, uses 150-13-0, p-Aminobenzoic acid 367-12-4, o-Fluorophenol 371-41-5, p-Fluorophenol 372-20-3, m-Fluorophenol 402-45-9, p-Trifluoromethylphenol 444-30-4, o-Trifluoromethylphenol 644-35-9, o-Propylphenol 645-56-7, p-Propylphenol 1633-14-3, 2,5-Dibromo-1,4-benzoquinone 5416-18-2, 2-Methoxy-3-methyl-1,4-naphthoquinone 9013-20-1, Streptavidin 50525-27-4, Tris(2,2'-bipyridyl)ruthenium(II)chloride hexahydrate 53655-94-0 102822-05-9

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT 7440-04-2D, Osmium, complexes, biological studies 7440-18-8D, Ruthenium, complexes, biological studies 216660-19-4 216660-20-7 216660-21-8 216660-22-9D, 3'-biotinylated 216660-23-0D, 5'-modified, 5'-ruthenium tris(bipyridine) and 3'-biotinylated derivs. 216660-24-1D, ruthenium tris(bipyridine) and biotin terminated

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses) (assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT 147190-40-7 178811-39-7 178925-21-8 216440-76-5D, succinyl protected derivative 216584-93-9

RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses) (assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

IT 64-17-5, Ethanol, analysis 1317-61-9, Magnetite, analysis 9002-92-0 9002-93-1, Triton X100

RL: ARU (Analytical role, unclassified); ANST (Analytical study) (assays employing electrochemiluminescent labels and electrochemiluminescence quenchers)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Blackburn, G; Clinical Chemistry 1991, V37(9), P1534 HCPLUS

(2) Dallakyan, G; 1979, P372 HCPLUS

(3) Dallakyan, G; Gidrobiologicheskii Zhurnal 1978, V14(5), P105 HCPLUS

(4) Greenway, G; Analyst 1995, V120(10), P2549 HCPLUS

(5) Kenten, J; Clinical Chemistry 1991, V37(9), P1626 HCPLUS

(6) Tyagi, S; Bio/Technology 1996, V14, P303 HCPLUS

(7) Ullman, E; US---4261968 A 1981 HCPLUS

(8) Ullman, E; US---5332662 A 1994 HCPLUS

L39 ANSWER 14 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1992:210536 HCPLUS

DN 116:210536

ED Entered STN: 31 May 1992

TI Luminescent/paramagnetic probes for detecting order in biological assemblies: transformation of luminescent probes into π -radicals by photochemical reduction

AU Ajtai, Katalin; Burghardt, Thomas P.

CS Dep. Biochem. Mol. Biol., Mayo Found., Rochester, MN, 55905, USA

SO Biochemistry (1992), 31(17), 4275-82

CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 6

AB The spectroscopic methods of fluorescence polarization and ESR (EPR) are used to study order and orientation of extrinsically labeled protein elements of ordered biol. systems. These methods generate complementary information about the order of the system, but a consistent quant. interpretation of the related data is complicated because the signals arise from different donors. A method is introduced that allows detection of both signals from the same donor. Unsubstituted xanthene dyes (eosin, erythrosin, and fluorescein) were irradiated by laser light at their absorption maximum in the presence of different reducing agents. Due to photochem. reduction, the quinoidal structure of the xanthene ring is transformed into a semiquinone, and a π -radical is formed having a characteristic EPR signal of an unpaired electron spin with proton hyperfine interactions. A strong EPR signal is observed from the dye in solution or when specifically attached to a protein following irradiation in the presence of dithiothreitol or cysteine. This technique was applied to the study of skeletal muscle fibers. The fluorescent dye (iodoacetamido)fluorescein was covalently attached to the reactive thiol of the myosin mol. in muscle fibers. Fluorescence polarization and EPR spectroscopy were performed on the labeled fibers in rigor. Both signals indicate a highly ordered system characteristic of cross-bridges bound to actin. The use of the same signal donor for fluorescence and EPR studies of probe order is a promising new technique for the study of order in protein elements of biol. assemblies.

ST protein order biol assembly luminescent probe; fluorometry protein order biol assembly; ESR protein order biol assembly; photochem redn luminescent probe radical

IT Spin labels
(for order detection in biol. systems)

IT Radicals, miscellaneous
RL: FORM (Formation, nonpreparative)
(formation of, from luminescent probes by photochem. reduction)

IT Electron spin resonance spectrometry
Fluorometry
(in order and orientation of proteins and biol. system study)

IT Reduction, photochemical
(of luminescent probes)

IT Muscle
(order and orientation in, luminescence/paramagnetic probes for study of)

IT Proteins, biological studies
RL: PRP (Properties)
(order and orientation of, in biol. systems, luminescent/paramagnetic probes for study of)

IT Myosins
RL: PRP (Properties)
(order and orientation of, in muscle, luminescent/paramagnetic probes for study of)

IT Fluorescent substances
(probes, for order detection in biol. systems)

IT 2321-07-5 16423-68-0, Erythrosin 17372-87-1, Eosin
RL: RCT (Reactant); RACT (Reactant or reagent)
(photochem. reduction of, order detection in biol. systems in relation to)

IT 63368-54-7P
RL: PREP (Preparation)
(preparation of)

L39 ANSWER 15 OF 15 HCPLUS COPYRIGHT 2006 ACS on STN
 AN 1987:614337 HCPLUS
 DN 107:214337
 ED Entered STN: 12 Dec 1987
 TI Parinaric acid as a sensitive fluorescent probe for the determination of lipid peroxidation
 AU Kuypers, Frans A.; Van den Berg, Jeroen J. M.; Schalkwijk, Casper; Roelofsen, Ben; Op den Kamp, Jos A. F.
 CS Oakland Res. Inst., Children's Hosp., Oakland, CA, USA
 SO Biochimica et Biophysica Acta, Lipids and Lipid Metabolism (1987)

), 921(2), 266-74
 CODEN: BBLLA6; ISSN: 0005-2760
 DT Journal
 LA English
 CC 9-5 (Biochemical Methods)
 Section cross-reference(s): 6
 AB The decrease in fluorescence of conjugated polyenic acyl chains is used as a sensitive assay for lipid peroxidn. The fatty acid cis-trans-trans-cis-9,11,13,15-octadecatetraenoic acid (cis-parinaric acid) is introduced into liposomal membranes as free fatty acid or, by using the phosphatidylcholine-specific transfer protein from bovine liver, as 1-palmitoyl-2-cis-parinaroyl-sn-glycero-3-phosphocholine. The peroxidn. process as monitored by the decrease in fluorescence intensity is compared with other peroxidn. assay systems, and applications of the new assay system are discussed.
 ST membrane lipid peroxidn detn fluorometry; parinaric acid lipid peroxidn detn; fluorescent probe lipid peroxidn detn
 IT Fluorometry
 (lipid peroxidn. determination by, in biomembranes, parinaric acid as probe for)
 IT Peroxidation
 (of lipids, determination of, in biomembranes, parinaric acid as fluorescent probe for)
 IT Fluorescence
 (of parinaric acid in phosphatidylcholine liposomes, lipid peroxidn. in relation to)
 IT Lipids, biological studies
 RL: BIOL (Biological study)
 (peroxidn. of, determination of, in biomembranes, parinaric acid as fluorescent probe for)
 IT Membrane, biological
 (bilayer, peroxidn. determination in liposome, parinaric acid as fluorescent probe for)
 IT Fluorescent substances
 (probes, parinaric acid as, for lipid peroxidn. determination in biomembranes)
 IT 593-38-4, cis-Parinaric acid 83349-96-6
 RL: ANST (Analytical study)
 (fluorescent probe, for lipid peroxidn. determination in biomembranes)
 IT 7722-84-1, Hydrogen peroxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (peroxidn. induction by copper and, determination of, in parinaric acid-containing liposomes)
 IT 7440-50-8, Copper, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (peroxidn. induction by hydrogen peroxide and, determination of, in parinaric acid-containing liposomes)

=> => b biosis
 FILE 'BIOSIS' ENTERED AT 16:09:51 ON 12 JUN 2006
 Copyright (c) 2006 The Thomson Corporation

FILE COVERS 1969 TO DATE.
 CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
 FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 7 June 2006 (20060607/ED)

=> d all 151 tot

L51 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 AN 2001:378376 BIOSIS
 DN PREV200100378376
 TI Method for the simultaneous determination of biomolecular interactions by

AU means of plasmon resonance and fluorescence detection.
 Herrmann, Rupert [Inventor, Reprint author]; Sluka, Peter
 [Inventor]; Knoll, Wolfgang [Inventor]; Liebermann, Thorstein [Inventor]
 CS Weilheim, Germany
 ASSIGNEE: Roche Diagnostics GmbH, Mannheim, Germany
 PI US---6194223 20010227
 SO Official Gazette of the United States Patent and Trademark Office Patents,
 (Feb. 27, 2001) Vol. 1243, No. 4. e-file.
 CODEN: OGUPE7. ISSN: 0098-1133.
 DT Patent
 LA English
 ED Entered STN: 8 Aug 2001
 Last Updated on STN: 19 Feb 2002
 AB A method for the detection of an analyte is described which is
 characterized in that the binding of the analyte to a solid phase is
 determined by the independent analysis of the signals from a plasmon
 resonance measurement and a fluorescence measurement.
 NCL 436518000
 CC General biology - Miscellaneous 00532
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Methods and Techniques
 IT Chemicals & Biochemicals
 analyte: detection, solid phase binding
 IT Methods & Equipment
 fluorescence detection: detection method; plasmon resonance measurement:
 measurement method
 IT Miscellaneous Descriptors
 simultaneous biomolecular interaction determination

=> d his

(FILE 'HOME' ENTERED AT 15:02:26 ON 12 JUN 2006)

FILE 'HCAPLUS' ENTERED AT 15:02:32 ON 12 JUN 2006
 L1 1 US2004234945/PN OR (US2004-766547 OR DE2003-10303265)/AP, PRN
 E HORN C/AU
 L2 84 E3-10,E15
 E JOSEL H/AU
 L3 42 E4,E6
 E SPINKE J/AU
 L4 28 E3-5
 E HERRMAN R/AU
 L5 8 E3-6
 E HERRMANN R/AU
 L6 568 E3-10
 E HERRMANN RUPERT/AU
 L7 54 E3-4
 E HEINDL D/AU
 L8 46 E3-4,E6
 E FLUOROMETRY/CT
 L9 23697 E3-26
 E E3+ALL
 L10 26787 E4+NT
 E E26
 L11 94407 E3-39,E41-49,E53-57
 E E3+ALL
 L12 96098 E4+NT
 E E23+ALL
 E E4
 E FLUOROMETERS/CT
 L13 3364 E3-12
 E E3+ALL
 L14 3364 E10
 L15 126695 L9-14
 E REDOX/CT

```

        E E4
        E E3+ALL
L16      477 E3
        E E9
        E E3+ALL
L17      360 E3+OLD
        E E8+ALL
L18      473707 E2+NT
        E E2
L19      27289 E3-24
L20      2032 L15 AND L16-19
L21      1173457 (BIOCHEM?(L)METHOD? OR ANALYT? (L) CHEM?)/SC, SX
L22      321 L21 AND L20
L23      258 L20 AND ANT/RL
L24      396 L22-23
        E FLUORESCENT/CT
        E E12+ALL
        E E2
L25      12004 E3-13
        E E3+ALL
L26      25282 E4+OLD, NT
L27      56 L24 AND L25-26
L28      1 L27 AND L1-8
L29      55 L27 NOT L28
        E FLUORESCENCE QUENCH/CT
L30      11746 E4-7
        E E4+ALL
L31      11746 E4
        5 L29 AND L30-31
L32      2 L32 AND (PY<=2003 OR AY<=2003 OR PRY<=2003)
L33      50 L29 NOT L32-33
L34      24 L34 AND (PY<=2003 OR AY<=2003 OR PRY<=2003)
        SEL AN 1 7 9-10 18 20-21 23-24
L35      9 E1-18 AND L35
L36      3 L34-36 AND QUENCH?/CW, CT, BI, SX, SC
L37      15 L32-33, L36, L37
L38      15 L38 AND L1-37
L39

```

```

FILE 'BIOSIS' ENTERED AT 16:03:27 ON 12 JUN 2006
L40      2899 FLUORESC? AND (REDOX? OR OXID? OR REDUC?) AND QUENCH?
L41      10 L40 AND ANALYTE#
        E HORN C/AU
L42      121 E3-15, E17
        E JOSEL H/AU
L43      25 E4-5
        E SPINKE J/AU
L44      10 E3-4
        E HERRMANN R/AU
L45      626 E3-14
        E HERRMANN RUPERT/AU
L46      9 E3
        E HEINDL D/AU
L47      13 E3-4
L48      0 L42-47 AND L40
L49      11 L42-47 AND FLUORESC?
L50      0 L49 AND QUENCH?
        SEL L49 AN 4
L51      1 E1 AND L49

```

=>